

CLAIMS

What is claimed is:

1. In a network device including a host system coupled to a memory to store data and a line card to interface with a plurality of user devices, a method comprising:

receiving a network packet including voice data by the host system;

storing the voice data in the memory;

sending a voice packet related to the voice data to the line card without duplication, the voice packet including descriptor fields for multicasting the voice data; and

selectively multicasting the voice data stored in the memory to the plurality of user devices based on the descriptor fields in the voice packet.

2. The method of claim 1, wherein the receiving of the network packet includes receiving an Internet Protocol (IP) packet having the voice data.

3. The method of claim 1, wherein the descriptor fields include a memory pointer field, status field, mask field, or a data length field.

4. The method of claim 3, wherein the selectively multicasting of the voice data includes using a multicast hardware accelerator to send the voice data to selected user devices based on the mask field.

5. The method of claim 4, wherein the multicast hardware accelerator includes a field programmable gate array (FPGA) device.
6. A digital processing system comprising:
 - a host system to receive a network packet including voice data;
 - a memory to store the voice data; and
 - a line card to receive a voice packet related to the voice data without duplication, the voice packet including descriptor fields for multicasting the voice data, and to multicast selectively the voice data stored in the memory to the plurality of user devices based on the descriptor fields in the voice packet.
7. The digital processing system of claim 6, wherein the host system is to receive an Internet Protocol (IP) packet having the voice data.
8. The digital processing system of claim 6, wherein the descriptor fields include a memory pointer field, status field, mask field, or a data length field.
9. The digital processing system of claim 8, wherein the line card includes a multicast hardware accelerator to send the voice data to selected user devices based on the mask field.
10. The digital processing system of claim 9, wherein the multicast hardware accelerator includes a field programmable gate array (FPGA) device.

11. An apparatus comprising:
- means for receiving a network packet including voice data;
 - means for storing the voice data;
 - means for receiving the voice packet related to the voice data without duplication,
- the voice packet including descriptor fields for multicasting the voice data; and
- means for multicasting selectively the stored voice data to a plurality of user devices based on the descriptor fields in the voice packet.
12. The apparatus of claim 11, wherein the means for receiving the network packet includes means for receiving an Internet Protocol (IP) packet having the voice data.
13. The apparatus of claim 11, wherein the descriptor fields include a memory pointer field, status field, mask field, or a data length field.
14. The apparatus of claim 13, wherein the means for multicasting includes means for accelerating the multicasting of the voice data based on the mask field.
15. The digital processing system of claim 11, wherein the user devices include digital signal processing devices.

16. A network device comprising:
- a host system including a host central processing unit (CPU) and an operating the system, the host system to process packets from a network;
- a buffer memory to store data from processed packets by the host system; and
- a line card having a plurality of ports to interface to user devices, the line card including a multicast hardware accelerator to multicast data stored in the buffer memory.
17. The network device of claim 16, wherein the multicast hardware accelerator includes a field programmable gate array (FPGA) device.
18. The network device of claim 16, wherein the host system is to send a packet relating to the data stored in the buffer memory, the packet includes descriptor fields used to multicast the data stored in the buffer memory.
19. The network device of claim 18, wherein the descriptor fields include a memory pointer field, status field, mask field, or a data length field.
20. The network device of claim 16, wherein the data stored in the buffer memory includes voice data, the voice data is to be multicast by the multicast hardware accelerator.

21. A medium storing instructions, the instructions to be processed by a processing unit to perform an operation comprising:

- receiving a network packet including voice data;
- storing the voice data;
- sending a voice packet related to the voice data to a line card without duplication, the voice packet including descriptor fields for multicasting the voice data; and
- selectively multicasting the stored voice data to a plurality of user devices based on the descriptor fields in the voice packet.

22. The medium of claim 21, further providing instructions to be processed by the processing unit to perform an operation comprising:

- receiving an Internet Protocol (IP) packet having the voice data.

23. The medium of claim 21, further providing instructions to be processed by the processing unit to perform an operation comprising:

- sending the voice packet including a memory pointer field, status field, mask field, or a data length field.

24. The medium of claim 23, further providing instructions to be processed by the processing unit to perform an operation comprising:

- selectively multicasting the voice data using a multicast hardware accelerator to send the voice data to selected user devices based on the mask field.

25. The medium of claim 24, further providing instructions to be processed by the processing unit to perform an operation comprising:

selectively multicasting the voice data using a field programmable gate array (FPGA) device as the multicast hardware accelerator.